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October 2, 2008

Robert L. Pettit
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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Ex Parte Presentation
IB Docket No. 95-91
WT Docket No. 07-293

Dear Ms. Dortch:

On October 1, representatives of Sirius XM Radio, Inc. ("Sirius XM") met with the staff of the Office of Engineering and Technology (OET) to discuss issues associated with the above-captioned proceedings.

Attending the meeting on behalf of Sirius XM were myself, Michael Lewis (Engineering Consultant) and Carl Frank from Wiley Rein, LLP and James Blitz, Alan Pate, Terry Smith, Craig Wadin, and Doug Ayerst of Sirius XM. Attending on behalf of OET were Julius Knapp, Ron Repasi, Bruce Romano, Rashmi Doshi, Pat Forster, Saurbh Chhabra, Solomon Satche and Ted Ryder.

The attached presentation,, along with pleadings previously filed by Sirius XM, formed the basis of our discussions. One area of discussion that requires clarification pertains to slide 8 of the attached presentation. That slide compares Sirius XM's recommendation for out-of-band emissions limitations with those presented by other parties in similar, but different proceedings. OET staff questioned Sirius XM on the origin of the numbers that are provided in that slide.

During our meeting, Sirius XM indicated that the data depicted in the table on slide 8 was adjusted to correct for differences in the recommendations presented by various parties. More specifically, the data was normalized based on the assumption of a 3 meter separation between a WCS mobile terminal and a satellite radio receiver as opposed to a 1 meter separation that most parties in the AWS-3 proceeding considered. The table also applied corrections for path loss difference between 1 meter at 2155 MHz and 3 meters at 2317.5 MHz using a path loss equation of free space plus 3 dB. Finally, the table applied corrections for any measurement bandwidth differences in the recommendations offered by the various parties.



October 2, 2008

Page 2

Please contact me if there are any questions on this filing.

Sincerely,

/s/ Robert L. Pettit

Robert L. Pettit

Counsel to Sirius XM Radio, Inc.

cc: Julius Knapp
Ron Repasi
Bruce Romano
Rashmi Doshi
Pat Forster
Saurbh Chhabra
Solomon Satche
Ted Ryder

Satellite Radio and WCS Coexistence

IB Docket No. 95-91
WT Docket No. 07-293

Sirius XM Radio, Inc.
October 1, 2008

Progress Toward Resolution

Rules for Satellite Radio Terrestrial Repeaters are Ready to be Resolved Now

- The primary issue for WCS licensees with satellite radio terrestrial repeaters is potential interference to WCS fixed base stations. Fixed-to-fixed interference can be mitigated with proper site planning.
- WCS receivers operating on the WCS C and D blocks would benefit from a 4 MHz guard band from terrestrial repeater transmitters. WCS operations in the A and B blocks would receive 9-14 MHz guard band from satellite radio terrestrial repeaters.
 - *Note that WCS proposes zero guard band to protect satellite receivers.*
- Potential interference to WCS mobile units is also minimized by the low number of satellite radio terrestrial repeaters in any given market and the typical high elevation location of the repeaters.

Progress Toward Resolution

Rules for Satellite Radio Terrestrial Repeaters are Ready to be Resolved Now

- Adoption of Sirius XM's recommended rules for terrestrial repeaters would benefit WCS operators by providing certainty and clarity of the adjacent band spectrum environment
 - Satellite repeaters will meet two conditions to control signal levels
 - Ground based limit less than 100 dB μ V/m in 95% of the market.
 - EIRP cap of 12 kW
 - Required OOB for satellite repeaters will be increased by 15 dB to $90+10\log(P)$
- Sirius XM would address future complaints of interference caused by existing and grandfathered repeaters through a formal process with an FCC enforcement backstop.

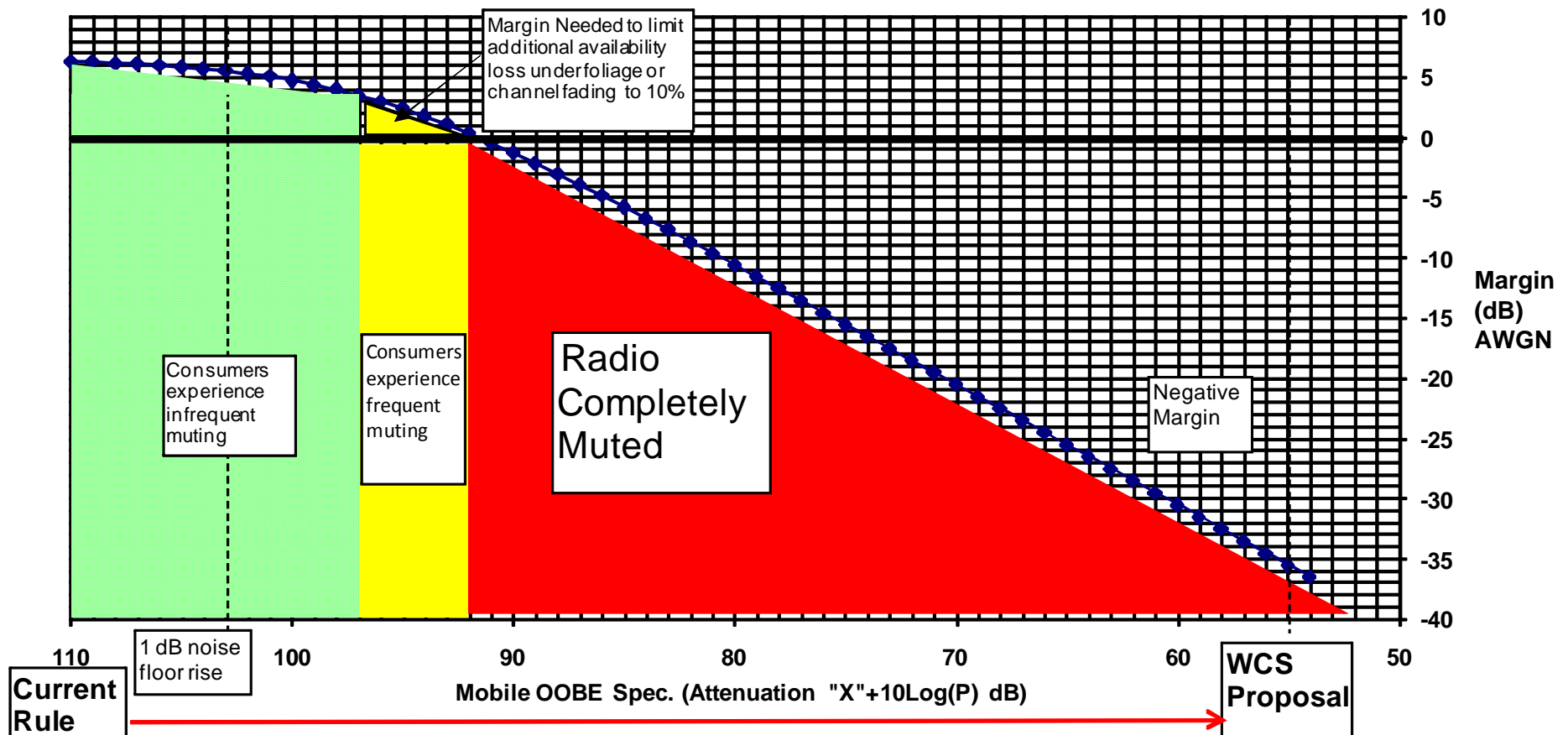
Progress Toward Resolution

Service to Existing Consumers Must be Protected

- The current record demonstrates that WCS's proposals for mobile operation will have the potential to mute millions of satellite radios and block service to millions of satellite radio listeners.
 - The technical fact is that satellites transmit from tens of thousands of miles away and operate with less link margin than terrestrial networks. Measurements show muting to satellite receivers from WCS devices located within 60 feet and even further.
 - Embedded satellite radio receivers were developed and sold to consumers under technical rules established in 1997 that did not contemplate incompatible mobile service on adjacent frequencies.
 - Uncongested highway situations show 13% probability of interference in early stages of WCS deployment rising to 24% in later stages.

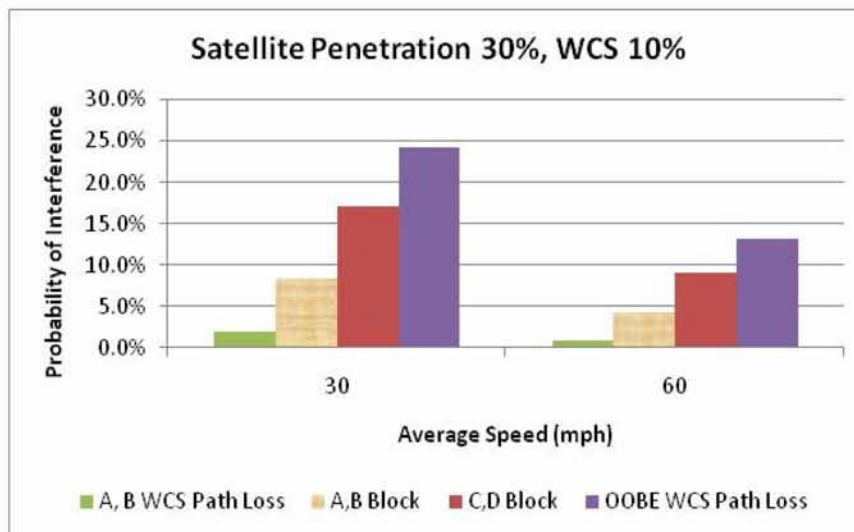
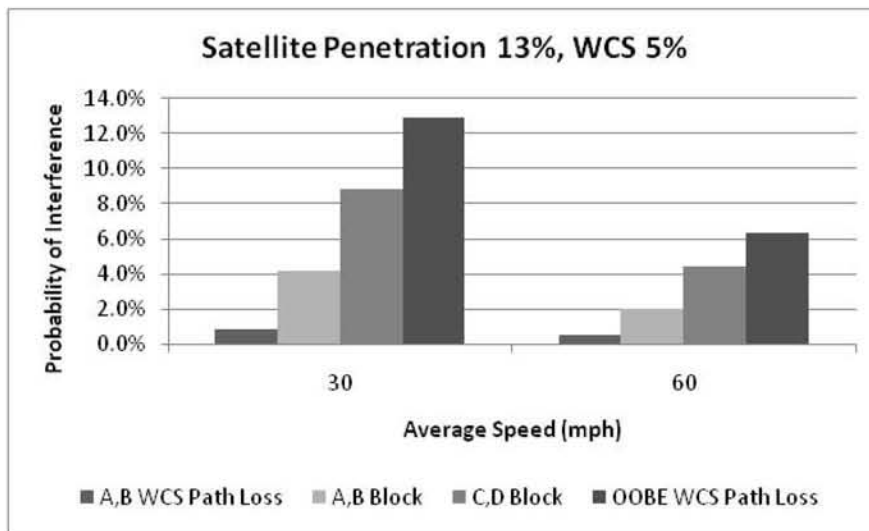
Progress Toward Resolution

Service to Existing Consumers Must be Protected



Progress Toward Resolution

Service to Existing Consumers Must be Protected



On congested highways, there is a high probability of consumers listening to satellite radio being blocked by multiple WCS mobile units.

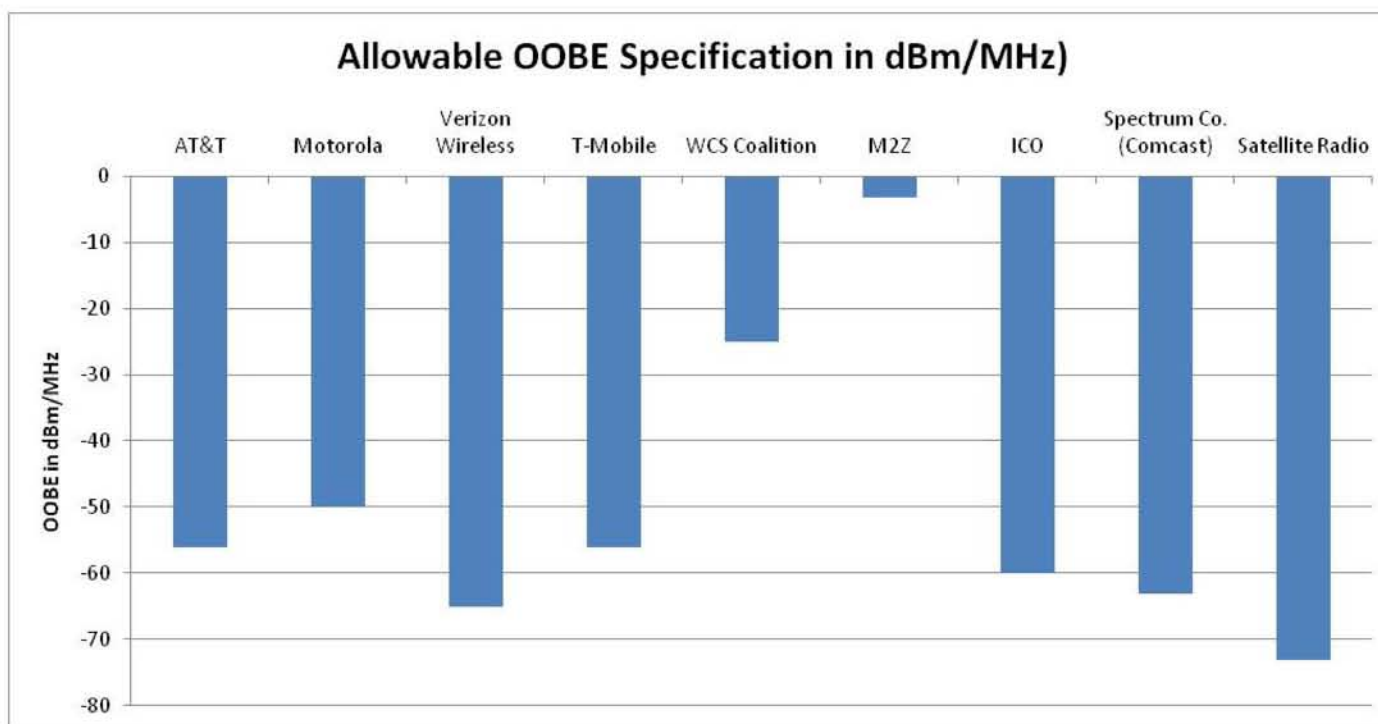
Progress Toward Resolution

FCC Rules Must Remain Technology-Neutral

- Reliance on technology-specific interference reduction mechanisms will disrupt service to millions of satellite radio users
 - Potential benefits of TPC and uplink duty cycle significantly over simplified.
 - E.g. “... A common misconception is that mobile stations transmit at maximum power only at the [edge](#) of a cell, and at lower power when mobiles are closer to the BS. In reality, this is not the case; mobile stations will transmit at high powers over a range of distances.... “
<http://www.embedded.com/design/208403248?pgno=3>
 - Such characteristics will vary in real-world deployments and are under control of each operator.
 - Other design deployments would invalidate any technology specific protection assumptions

Progress Toward Resolution

Conclusions Should Be Consistent with AWS-3 and H Block



Sirius XM's recommendations for protection from out-of-band emissions are fully consistent with those expressed by the majority of the terrestrial wireless industry in AWS and H-Block proceedings.

Progress Toward Resolution

Where do we go from here?

- The immediate adjacency of the WCS C and D blocks to satellite radio dictates that no change in the technical rules be permitted for that spectrum.
- *Some* additional flexibility to enable WCS mobile operations in the WCS A and B blocks might be possible *provided that*:
 - Appropriate guard bands to satellite radio are maintained.
 - Appropriate restrictions on maximum power and out-of-band emissions limits are maintained.
- Allow for “burst average” power measurements only where interference from satellite repeaters can be demonstrated.
 - “It is not expected that WCS licensees will routinely operate at 2,000 Watts average EIRP, because such high power is unnecessary to serve consumers in most environments and could result in self-interference. However, increasing the maximum permissible WCS power level to the same power level authorized for SDARS terrestrial repeaters will provide WCS licensees the ability, where necessary, to increase their own power levels to avoid interference from SDARS” WCS Coalition Comments, 2/14/08 at B(1)
 - This change in measurement technique should equally apply to satellite radio terrestrial repeaters.